

by pressing the fiber material web together with a band at a dewatering pressing pressure of at most 2 MPa in all nips of the press area, wherein the dewatering pressing pressure in all nips of the press area is exerted for a time duration of at least 3.5 ms.

**REMARKS**

***Summary of the Amendment***

Upon entry of the above amendment, claim 9 will have been amended. Accordingly, claims 9 - 13 remain pending.

***Summary of the Official Action***

In the instant Office Action, the Examiner has rejected claims 9 - 13 over the art of record. By the present amendment and remarks, Applicants submit that the rejections have been overcome, and respectfully request reconsideration of the outstanding Office Action and allowance of the present application.

***Amendment is Proper for Entry***

Applicants submit that the instant amendment does not raise any new issues for consideration by the Examiner nor any question of new matter. In particular, Applicants submit that the instant merely clarifies the claims to avoid any confusion. Moreover, as the instant amendment places the application in condition for allowance, or at least reduces the number of issues for appeal, Applicants request entry and consideration of the present amendment.

***Traversal of Rejection Under 35 U.S.C. § 102(b)***

Applicants traverse the rejection of claims 9 and 10 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over LAAPOTTI (U.S. Patent No. 4,976,820) [hereinafter “LAAPOTTI ‘820”]. The Examiner asserts that Figures 1 and 1A show the recited features, including a time duration of 20 ms and a pressure of between 0.2 and 1 MPa, and that LAAPOTTI ‘820 teaches the pressure is intensified to a peak value approximately one order higher than the pressure applied in the preceding step. Applicants traverse the Examiner’s assertions.

Applicants note that the instant invention is directed to a machine for the production of a tissue web. In order to achieve a saleable tissue, it is necessary that the web be a high bulk web, which is achieved in the present invention through gentle dewatering of the web at pressing pressures of maximally 2MPa throughout the pressing procedure.

Accordingly, to even more clearly set forth the subject matter of the instant invention, independent claim 9 has been amended to recite, *inter alia*, dewatering the fiber material web in a press area composed of at least one press nip by *pressing the fiber material web together with a band at a dewatering pressing pressure of at most 2 MPa in all nips of the press area*, wherein the dewatering pressing pressure in all nips of the press area is exerted for a time duration of at least 3.5 ms. Further, Applicants independent claim 12 recites, *inter alia*, pressing the fiber material web against a drying cylinder such that *a pressing pressure of at most 2 MPa is exerted on the fiber material web against the drying cylinder*, in which the

fiber material web is pressed against the drying cylinder for a time duration of at least 3.5 ms.

Applicants submit that LAAPOTTI '820 fails to disclose at least the above-noted feature.

Applicants note that independent claims 9 and 12 recite a maximum pressing force of 2MPa to be exerted on the web and do not recite pressures exerted by a particular press nip. This pressing results in the desired gentle dewatering to increase the web bulk and, thereby, improve the quality of the tissue produced.

Thus, Applicants note that, as LAAPOTTI '820 discloses a dewatering arrangement in which the material web is pressed at various locations and at different pressing pressures, and, as shown in Figure 1A, the web of LAAPOTTI '820 is pressed at a pressing pressure that exceeds 2MPa (i.e., in nip N), LAAPOTTI '820 fails to disclose at least the above-noted feature of the instant invention.

While the Examiner notes that LAAPOTTI '820 discloses that the pressure is intensified to a peak value approximately one order higher than the pressure applied in the preceding step, LAAPOTTI '820 provides no guidance as to what this actually means. In particular, Applicants note that LAAPOTTI '820 provides four illustrated examples in which the peak pressure is 8MPa (Figure 1A), 8MPa (Figure 2A), 7MPa (Figure 3A), and 7MPa (Figure 4A), yet the pressure in the preceding steps is significantly less than 1MPa, i.e., nearly zero, in each example. Thus, Applicants submit that LAAPOTTI '820 fails to provide any teaching or suggestion of gentle dewatering in which the web is pressed with a pressing

pressure of at most 2MPa, as recited in at least independent claims 9 and 12. Moreover, as the examples of LAAPOTTI '820 do not even remotely suggest a peak pressure of at most 2MPa, Applicants submit that this document fails to anticipate or render unpatentable the instant invention.

Further, Applicants submit that the peak pressure applied and desired by LAAPOTTI '820 is intended to provide "intense" dewatering, which is wholly in contrast to the features of the instant invention. By the same token, Applicants submit that to modify LAAPOTTI '820 to utilize a pressing pressure of at most 2MPa would be contrary to the express disclosure of providing an intense dewatering. In this regard, LAAPOTTI '820 specifically discloses that the intense pressure is utilized so that, in compression stage C<sub>1</sub>, "the water vapor is blown through the paper web W and produces blowing-off of water contained in intermediate spaces between fibers in the web, and thereby an intensified pressing result and a higher dry solids content K<sub>a<sub>out</sub></sub>." (LAAPOTTI '820 column 8, lines 26 - 32). Thus, while the intense pressure can be one order higher than the pressure in the preceding step, LAAPOTTI '820 also discloses that this intense pressure must result in the above-noted actions within the web.

Thus, Applicants submit that it would have been wholly contradictory to the express disclosure of LAAPOTTI '820 for one ordinarily skilled in the art to modify LAAPOTTI '820 to utilize a maximal pressing pressure of 2MPa in order to effect a gentle dewatering

to increase bulk. Further, Applicants note that the Examiner has not provided any assertions or documentary evidence that a pressure merely one order higher than the preceding pressure, but significantly less than the stated examples of LAAPOTTI '820 (particularly at most 2MPa), would satisfy the other disclosed requirements of the intense pressure to produce the intended actions within the pressing stage.

Because LAAPOTTI '820 fails to disclose each recited feature of claims 9 and 12, Applicants submit that this document fails to provide an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. § 102(b), and that the instant rejection is improper and should be withdrawn.

Further, Applicants submit that, as the asserted modification of LAAPOTTI '820 is contrary to its own disclosed intention and, therefore, would result in LAAPOTTI '820 operating in a manner contrary to its disclosure and examples, Applicants submit that no proper modification of LAAPOTTI '820 renders the instant invention unpatentable.

Moreover, as the asserted modification would result in a system that cannot operate in the manner for which it is intended, Applicants submit that the art of record fails to provide the necessary motivation or rationale for modifying LAAPOTTI '820 in the manner asserted by the Examiner. Therefore, the instant rejection is improper and should be withdrawn.

Further, Applicants submit that claim 10 is allowable at least for the reason that it

depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Applicants submit that LAAPOTTI '820 fails to anticipate, *inter alia*, the fiber material web comprises one of a tissue paper and a hygienic paper web, as recited in claim 10.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claims 9, 10, and 12 under 35 U.S.C. § 102(b)/35 U.S.C. § 103(a) and indicate that these claims are allowable.

***Traversal of Rejection Under 35 U.S.C. § 103(a)***

1. **Over Laapotti '820**

Applicants traverse the rejection of claim 10 under 35 U.S.C. § 103(a) as being unpatentable over LAAPOTTI '820. The Examiner asserts that it would have been inherent to use LAAPOTTI '820 in the manufacture of tissue or that it would have been obvious to manufacture tissue as suggested in the discussion of background art in LAAPOTTI '820. Applicants traverse the Examiner's assertions.

For the reasons set forth above, Applicants note that LAAPOTTI '820 fails to provide any teaching or suggestion of pressing the web at a pressing pressure of at most 2MPa, as recited in at least independent claim 9. In particular, as each example provided in LAAPOTTI '820 shows that the web is pressed at a pressing pressure in excess of 7MPa, Applicants submit that this document fails to provide any teaching or suggestion of gentle

dewatering, and certainly no teaching of pressing the web with a pressing pressure of at most 2MPa, as recited in at least independent claim 9.

Further, Applicants submit that claim 10 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Applicants submit that LAAPOTTI '820 fails to teach or suggest, *inter alia*, the fiber material web comprises one of a tissue paper and a hygienic paper web, as recited in claim 10.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claim 10 under 35 U.S.C. § 103(a) and indicate that this claim is allowable.

2. Over Laapotti '046 in view of Laapotti '820

Applicants traverse the rejection of claims 9, 10, 12, and 13 under 35 U.S.C. § 103(a) as being unpatentable over LAAPOTTI (U.S. Patent No. 5,043,046) [hereinafter "LAAPOTTI '046"] in view of LAAPOTTI. The Examiner asserts that LAAPOTTI '046 shows a drying cylinder 10 opposite an extended nip shoe. While acknowledging that LAAPOTTI '046 is silent as to the pressure and duration within the press nip, the Examiner asserts that it would have been obvious to operate at any pressure and duration. The Examiner has also indicated that, if necessary, LAAPOTTI '820 can be relied upon for teaching using pressures of at most 2MPa and time durations of at least 3.5 msec. Applicants traverse the Examiner's assertions.

Applicants note that, as acknowledged by the Examiner, LAAPOTTI '046 is directed solely to the apparatus, and provides no teaching or suggestion with regard to the process features recited in the instant claims. To render the instant invention obvious, LAAPOTTI '046 must provide some teaching or suggestion of the recited process, which the Examiner's blanket statement of obviousness fails to do. Accordingly, Applicants submit that LAAPOTTI '046 is an insufficient teaching of the positively recited features of Applicants' process. As such, Applicants submit that LAAPOTTI '046 fails to provide any teaching or suggestion of the process recited in any of the pending claims, and certainly none of the features recited in at least independent claims 9, 12, and 13.

Moreover, for the reasons set forth above in the discussion of LAAPOTTI '820, it would not have been obvious to operate LAAPOTTI '046 with a pressure of at most 2MPa, since LAAPOTTI '820 fails to provide any such teaching. That is, LAAPOTTI '820 discloses the use of intense pressure, e.g., 7 - 8 MPa, and fails to provide any suggestion that a maximum pressure of 2MPa would be an intense pressure that would satisfy the requirements of LAAPOTTI '820.

Further still, as LAAPOTTI '820 discloses a plurality of distinct press stages within the press area, it is not apparent why one ordinarily skilled in the art would adopt one of these pressures for operating LAAPOTTI '046, when LAAPOTTI '820 clearly discloses that it is the combination of these pressures that are necessary to achieve the desired results. Thus,

Applicants submit that it would not have been obvious to modify LAAPOTTI '046 in the manner asserted by the Examiner.

Accordingly, Applicants submit that no proper combination of the applied documents teaches or suggests the combination of features recited in at least independent claims 9, 12, and 13. Further, Applicants submit that, even assuming, *arguendo*, that the documents were combined in the manner asserted by the Examiner, since neither document provides any teaching or suggestion of gentle dewatering at maximal pressures of 2MPa, the instant invention is not rendered unpatentable.

Further, Applicants submit that claim 10 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Applicants submit that LAAPOTTI '820 fails to anticipate, *inter alia*, the fiber material web comprises one of a tissue paper and a hygienic paper web, as recited in claim 10.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claims 9, 10, 12, and 13 under 35 U.S.C. § 103(a) and indicate that these claims are allowable.

3. Over Laapotti '820 or Laapotti '046 and '820 in view of Eber

Applicants traverse the rejection of claim 11 as being unpatentable over LAAPOTTI '820 or LAAPOTTI '046 and '820 in view of EBER et al. (U.S. Patent No. 4,488,932)

[hereinafter "EBER"].

Applicants note that EBER fails to provide any teaching or suggestion of the subject matter noted above as deficient in LAAPOTTI '820 and '046. In particular, EBER fails to provide any teaching or suggestion for modifying LAAPOTTI '820 or '046 in any manner that would render the instant invention unpatentable. That is, EBER does not provide any teaching or suggestion for modifying LAAPOTTI '820 or '046 to press the web in all nips of the press area at a pressing pressure of at most 2MPa, as recited in at least independent claim 9.

Further, Applicants submit that claim 11 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Applicants submit that LAAPOTTI '820 fails to teach or suggest, *inter alia*, the fiber material web comprises curled fibers, as recited in claim 11.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claim 11 under 35 U.S.C. § 103(a) and indicate that this claim is allowable.

4. Over Schiel in view of Laapotti '820

Applicants traverse the rejection of claims 9, 10, 12, and 13 under 35 U.S.C. § 103(a) as being unpatentable over SCHIEL (U.S. Patent No. 6,004,429) in view of LAAPOTTI '820.

Applicants note that, as independent claims 9, 12, and 13 recite a process in which the pressing pressure exerted on the web is at most 2 MPa, SCHIEL fails to render the instant invention obvious. In particular, Applicants note that SCHIEL discloses a number of presses, and that the main press is operated within a range of 2.5 - 5 MPa, which is outside of the recited range of independent claims 9, 12, and 13.

Moreover, SCHIEL fails to provide any teaching or suggestion for reducing the pressing pressures in the main press to levels that would render the instant invention obvious. While asserting that it would have been obvious for SCHIEL to operate at pressures lower than its disclosed operating range, the Examiner has not pointed to any teaching within the art of record that would provide the motivation or rationale to one ordinarily skilled in the art to operate outside the disclosed range. In fact, Applicants note that, while SCHIEL provides reasons for operating within his disclosed pressure range, he does not provide any reasons for operating outside of the range. Thus, Applicants submit that SCHIEL provides not guidance to those ordinarily skilled in the art for operating his press outside of the disclosed ranges.

Further, Applicants note that, while the Examiner has applied LAAPOTTI '820 for teaching dwell times, this document fails to provide any teaching or suggestion for operating SCHIEL outside of its disclosed operational pressure range and, therefore, fails to render the instant invention obvious.

Because none of the applied documents provide any teaching or suggestion for modifying SCHIEL in any manner which would render unpatentable the instant invention recited in at least independent claims 9, 12, and 13, and because SCHIEL alone fails to suggest any such modification, Applicants submit that process recited in at least independent claims 9, 12, and 13 are not rendered obvious by any proper combination of SCHIEL and LAAPOTTI '820.

Further, Applicants submit that claim 10 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Applicants submit that SCHIEL fails to teach or suggest, *inter alia*, the fiber material web comprises one of a tissue paper and a hygienic paper web, as recited in claim 10.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claims 9, 10, 12, and 13 under 35 U.S.C. § 103(a) and indicate that these claims are allowable.

4. Over Schiel with Laapotti '820 and further in view of Eber

Applicants the rejection of claim 11 as being unpatentable over SCHIEL in view of LAAPOTTI '820 and EBER.

As discussed above, none of the applied documents teach or suggest a process in which the pressing pressure exerted on the web in all nips is at most 2 MPa. Accordingly,

Applicants submit that no proper combination of such documents can render unpatentable the instant invention.

Thus, Applicants submit that no proper combination of SCHIEL, LAAPOTTI '820, and EBER teaches or suggests the combination of features recited in at least independent claim 9.

Further, Applicants submit that claim 11 is allowable at least for the reason that it depends from allowable base claims and because it recites additional features that further define the present invention. In particular, Applicants submit that no proper combination of SCHIEL, LAAPOTTI '820, and EBER teaches or suggests, *inter alia*, the fiber material web comprises curled fibers, as recited in claim 11.

Accordingly, Applicants request that the Examiner reconsider and withdraw the rejection of claim 11 under 35 U.S.C. § 103(a) and indicate that this claim is allowable.

***Application is Allowable***

Thus, Applicants respectfully submit that each and every pending claim of the present invention meets the requirements for patentability under 35 U.S.C. §§ 102 and 103, and respectfully request the Examiner to indicate allowance of each and every pending claim of the present invention.

***Authorization to Charge Deposit Account***

The Commissioner is authorized to charge to Deposit Account No. 19 - 0089 any necessary fees, including any extensions of time fees required to place the application in

condition for allowance by Examiner's Amendment, in order to maintain pendency of this application.

**CONCLUSION**

In view of the foregoing, it is submitted that none of the references of record, either taken alone or in any proper combination thereof, anticipate or render obvious the Applicants' invention, as recited in each of claims 9 - 13. The applied references of record have been discussed and distinguished, while significant claimed features of the present invention have been pointed out.

Further, any amendments to the claims which have been made in this response and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Accordingly, reconsideration of the outstanding Office Action and allowance of the present application and all the claims therein are respectfully requested and now believed to be appropriate.

Respectfully submitted,  
Thomas Thoroe SCHERB et al.

Neil F. Greenblum  
Reg. No. 28,394

P21821.A03

March 13, 2003  
GREENBLUM & BERNSTEIN, P.L.C.  
1941 Roland Clarke Place  
Reston, VA 20191  
(703) 716-1191

**APPENDIX**

***Marked-Up Copies of the Amended Claims:***

9. (Twice amended) A process for the manufacture of a fiber material web, comprising:

dewatering the fiber material web in a press area composed of at least one press nip by pressing the fiber material web together with a band at a dewatering pressing pressure of at most 2 MPa in all nips of the press area, wherein the dewatering pressing pressure in all nips of the press area is exerted for a time duration of at least 3.5 ms.